

### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization

International Bureau



## 

## (43) International Publication Date 27 May 2004 (27.05.2004)

**PCT** 

# (10) International Publication Number WO 2004/044046 A2

(51) International Patent Classification7:

C08L

William [US/US]; 18 Woodland Drive, West Paterson, NJ 08844 (US).

(21) International Application Number:

PCT/US2003/035526

(22) International Filing Date:

7 November 2003 (07.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/424,928 8 November 2002 (08.11.2002) US

- (71) Applicants (for all designated States except US): ENCY-SIVE PHARMACEUTICALS [US/US]; 6700 West Loop South, Bellaire, TX 77401 (US). SCHERING CORPO-RATION [US/US]; 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): VANDERSLICE, Peter [US/US]; 3427 Gannett, Houston, TX 77025 (US). HOLLAND, George [US/US]; 3331 Green Tree Park, Houston, TX 77007 (US). SHIH, Neng-Yang [US/US]; 1 Maple Drive, North Caldwell, NJ 07006 (US). ASLANIAN, Robert, G. [US/US]; 144 Philip Drive, Rockaway, NJ 07866 (US). CHAPMAN, Richard, W. [US/US]; 30 Ditmars Circle, Hillsboro, NJ 07866 (US). KREUTNER,

- (74) Agent: KATZ, Martin, L.; Wood, Phillips, Katz, Clark & Mortimer, 500 West Madison Street, Suite 3800, Chicago,
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

IL 60661 (US).

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMBINATION PRODUCTS WITH CARBOXYLIC ACID DERIVATIVES THAT INHIBIT THE BINDING OF INTEGRINS TO THEIR RECEPTORS AND OTHER THERAPEUTIC COMPOUNDS

(57) Abstract: A composition, method and kit comprising a compound for the inhibition of the binding of  $\alpha_4\beta_1$  integrin to its receptors, for example VCAM-1 (vascular cell adhesion molecule-1) and fibronectin and other therapeutic compounds for the control or prevention of diseases states in which  $\alpha_4\beta_1$  is involved.







### INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/35526

A. CLASSIFICATION OF SUBJECT MATTER  IPC(7) : C07D 239/47, 213/75, 237/22, 215/38, 498/04; A61K 31/505, 31/44, 31/50  US CL : 546/155, 183, 296, 297; 544/319; 514/269, 299, 312, 348, 349  According to International Patent Classification (IPC) or to both national classification and IPC  B. FIELDS SEARCHED  Minimum documentation searched (classification system followed by classification symbols)  U.S.: 546/155, 183, 296, 297; 544/319; 514/269, 299, 312, 348, 349			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CAS ONLINE			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category * Citation of document, with indication, w	here appropriate, of the relevant passages	Relevant to claim No.	
X EP 1,203,766 A2 (BIEDIGER et al) 08 May and corresponding examples.	2002 (08.05.2002), see Formula i m page 3	1-26	
Further documents are listed in the continuation of Bo	ox C. See patent family annex.		
Special categories of cited documents:	"T" later document published after the in	ternational filing date or	
"A" document defining the general state of the art which is not considered be of particular relevance	"Y" document of narticular relevance: th	e claimed invention	
"E" earlier application or patent published on or after the international fate	filing considered novel or cannot be considered movel or cannot be considered to the document is taken along the considered novel or cannot be considered no	dered to involve an inventive	
"L" document which may throw doubts on priority claim(s) or which is to establish the publication date of another citation or other special (as specified)	cited "Y" document of particular relevance; the reason considered to involve an inventive si combined with one or more other sue combination being obvious to a pers	tep when the document is the documents, such	
"O" document referring to an oral disclosure, use, exhibition or other m	eans "&" document member of the same paten		
"P" document published prior to the international filing date but later the			
Date of the actual completion of the international search	the actual completion of the international search  Date of mailing of the international search  28 JUL 2004		
13 April 2004 (13.04.2004)			
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US  Commissioner for Patents P.O. Box 1450	Deepak R Rao  Telephone No. (571) 272-1600	Deepak R Rao gre price Rices	
Alexandria, Virginia 22313-1450 Feesimile No. (703) 305-3230			

Form PCT/ISA/210 (second sheet) (July 1998)